

BAS Course Instruction



WebCTRL Operator 3

Who is this course for?	Individuals who have completed the WebCTRL Operator Level 1 and 2 courses—to further develop troubleshooting expertise
Format	Instructor-led training with extensive hands-on tasks. The class environment is relaxed, and student participation is encouraged. Each student workstation includes a WebCTRL server and a set of online ALC hardware.
Length	2 1/2 days
Objective	Attendees will be able to: <ul style="list-style-type: none">• Troubleshoot ARCNET reconfigurations• Understand the theory of token passing• Perform module statuses identifying possible controller issues• Physically connect peripheral devices such as relays, sensors, and actuators• Troubleshoot various module level alarms• Identify failed peripheral devices and what to do to correct them
Prerequisites	Completion of WebCTRL Operator Level 1 and 2 courses (or 6 months' field experience installing and setting up a WebCTRL system)
Course Outline	<p>DAY 1</p> <p>Control Module Applications</p> <p>Detailed overview of the Automated Logic Hardware and the typical applications of each control module type (OptiFlex, LGR, OFBBC, ME-line, SE-line, ZN-line, RC-line, ZS-Sensors). If attendee system configuration includes older control modules, they will also be added to this discussion.</p> <p>Network Configuration</p> <ul style="list-style-type: none">• Discussion of basic network configurations including wiring guidelines and device locations for ARC156 network configurations• Module addressing discussion <p>ARC156 Control Module Communications</p> <ul style="list-style-type: none">• Overview of the ALC token pass communication protocol (how modules communicate with one another)• Discussion and observation of the transmit and receive LEDs on each module• Exercise in troubleshooting ARCNET reconfigurations• Discussion on configuring WebCTRL network points and how they affect communication speed: attendees will configure network points and learn how the refresh time works on the system

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Course Outline

DAY 2

Module Startup

- Discussion of and exercise in connecting laptop computer to the LGR local access port and the OptiFlex G5CE service port
- Exercise in verifying communications using the WebCTRL Modstat manual command
- Exercise in module addressing
- Exercise in downloading control programs by performing a memory download
- Exercise in hard formatting modules
- Overview of technical instructions
- Overview of steps to take before repairing or replacing a module
- Exercise in replacing a SE6104
- Exercise in adding a ZN341v+ (for Exec. B.x) including how to address the module
- Exercise in adding an AAR to the ARC156 network

Eikon Control Programming

- Discussion of typical programming styles
- Overview of most commonly used microblocks
- Exercise debugging a control program

DAY 3

Input/Output Points and Field Devices

- Discussion of physical connection of peripheral devices such as relays, sensors, and actuators, including references to technical instruction documents
- Exercises in software configuration of points using the Checkout Commissioning tool
- Exercise in connecting an actuator, a relay, and a sensor, and properly configuring it

Airflow Microblock

- Discussion about the patented algorithm which provides fast response while minimizing overshoot and damper movements
- Exercise performing test and balance using the properties within the Airflow microblock

Troubleshooting

- Demonstration of various module level alarms and how to troubleshoot them
- Demonstration of various WebCTRL error pop-up dialogs that are caused by hardware problems and what to do to correct them
- Demonstration of symptoms of failed peripheral devices and what to do to correct them
- If time permits, open lab session where students can state specific errors they have seen and what could have caused them

Review and Conclusion